

**Title: ISOLATION AND IDENTIFICATION OF MOLECULAR YEAST EPIPHYTIC ASSOCIATED WITH PLANTS OF ANTARCTICA**

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**Abstract:**

Epiphytic microorganisms are defined as those that typically colonize asymptotically vegetables outdoor microhabitats, being often found on the surfaces flights from leaves, flowers and fruits. Among these yeasts have been described as specific to these micro-habitats. Therefore, the isolation of yeasts associated to local plant largely unexplored and / or extreme as Antarctica may lead to the discovery of microorganisms with great biotechnological interest and application to various industrial processes. Thus, the aim of this study was to isolate and identify by molecular techniques the community of yeasts associated to two plants present in the Antarctic region (*Colobanthus quitensis*) and (*Deschampsia Antactica*). For the study were collected samples from various points of Admiralty Bay, situated in the area of protection and Antarctica Management (ASMA), during the austral summer, between the months of December 2014 and February 2015 collected from *C.quitensis* and *D. Antarctica* Fragments were added into vials containing saline solution (0.85%), where were then removed and aliquots of the suspension plated on YMA medium. The obtained colonies were morphologically described based on macroscopic characteristics. And for the molecular identification was analyzed D1-D2 region of ribosomal DNA subunit higher. Each individual had this DNA region amplified and sequenced. The sequence obtained was then compared by GenBank database and only selected the sequences showed similarity equal to or above 99% according Droby and Kurtzman (2001). Of the samples collected from *C.quitensis* they were obtained a total of 42 isolates which were identified as belonging to the species *Mrakia cf. gelida*, *Mrakia robertii*, *Cryptococcus victoriae*, *Cryptococcus aquaticus*, *Rhodotorula psychrophenolica* *Rhodotorula glacialis*, *Dioszegia Antarctica*, *Dioszegia crocea* and *Dioszegia fristingensis*. *D. Antactica* already presented a total of 38 isolates were identified where the species, *Mrakia cf.gelida*, *Cryptococcus victoriae*, *Leucosporidiella creatinivora* and *Dioszegia fristingensis*. Among the obtained yeast *Cryptococcus victoreae* was the most frequently identified among the species under study. Obtaining 80 isolates associated with epiphytic flora of plants present in Antarctica indicates that these represent a promising reservoir and reinforces the importance of studies aimed at the characterization of microorganisms in extreme environments.

**Keywords:** epiphytic micro-organisms; Antarctic yeast, molecular identification.

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